Sibeck
Ukhorskiy
Takahashi
Fox
Wygant
Spence
Kletzing
Giles
Rowland
Li
Hoffman

Doug described strategy
Paul goes through his presentation
- certain number of events / year with a fixed duration (1 day/event, 1 event /month)
- excel spreadsheet tracks regions
  - no tracking of two vehicles
  - set of parameters define critical region
  - another spreadsheet describes orbital elements for two-probe
  - trace orbit
  - B,L tracing for L and MLT
  - where did L, MLT, Mlat ranges come from?
- question from Sasha:
  - L shell seems very low for EMIC, magnetosonic
  - Paul: Definitions need more work and refinement
- Wygant: need to add rows, e.g. substorm injections
  - Geoff: "Midnight sources" includes substorm injections, ring current injections, etc.
- Wygant: don't decide based on how many rows are satisfied by an orbit
  - Paul: this defines a trade space
- Wygant: include some text that states that number of rows is not a criterion.
- Reeves: Each row should be treated independently, to show how changing orbit affects that particular row and likelihood of observing that type of event during the mission.
- Obrien: Percentage represents time that either vehicle is in the given box.
  - Orbits defined co-orbital with 0.02 (120 km) apogee difference
  - probability of observing at least two events by at least one spacecraft each, during the two year mission
- Kletzing: Do you do ensembles of 2-year missions, to account for the random distribution of events
  - Obrien: calculates how long is it between visits to this box - how likely are we to be outside the box for a whole day
- Necessary for programmatic reasons / funding reasons to do final analysis at APL
- Linkage between Obrien and flowdown - takes into account 2-vehicle, revisit times
- Xinlin: region definition focused on VLF waves. ULF waves not included.
- Sasha: ULF waves should be included as they may strongly drive the orbit (largest near magnetopause, driving apogee)

- Obrien: what about angle between line of nodes and line of apsides
- Obrien: I have code that calls ONERA open-source library to do orbit tracing, B/L tracing, calculation of invariants (supports wide range of magnetic field models). Should I contribute these to APL?

- Geoff: Look at ability of these to fill out the top couple of objectives.

- Action items:
  - Reeves define rows in OBrien table
  - Sasha, Xinlin flesh out Approach 1.1, 1.2
  - Wygant approach 1.4
  - Rowland and Sibeck 1.3